

EDoF efficiency – Truth in a confusing nomenclature

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Financial Disclosure



Cooperations

Acufocus ^{1,3}	LensAR ¹
Bausch & Lomb ^{2,3}	MST ⁴
Biotech ^{1,3}	Centricity
BVI ^{1,3}	Vision ⁴
Carl Zeiss	Nidek ³
Meditec ^{1,2,3,4}	Oculus ³
Eyesight and Vision ¹	PhysIOL ^{1,2,3}
Hanita ^{1,3}	Polytech ^{2,3,4}
Hoya ^{1,3,4}	Rayner ³
IOLExpert ^{1,3}	Teleon ^{1,2,3,4}
iSTAR medical ¹	TRIALCARE ¹
	Vivior ¹
	VSYS ^{1,3}



1 = Research; 2 = Travel Cost; 3 = Honorary; 4 = Consulting



Enhanced depth of Focus IOs

2021
TRENDS

Mono- EDoF vs rotational asymmetric +1.5 D add

Comfort MF15



Acunex Vario



ICBOO



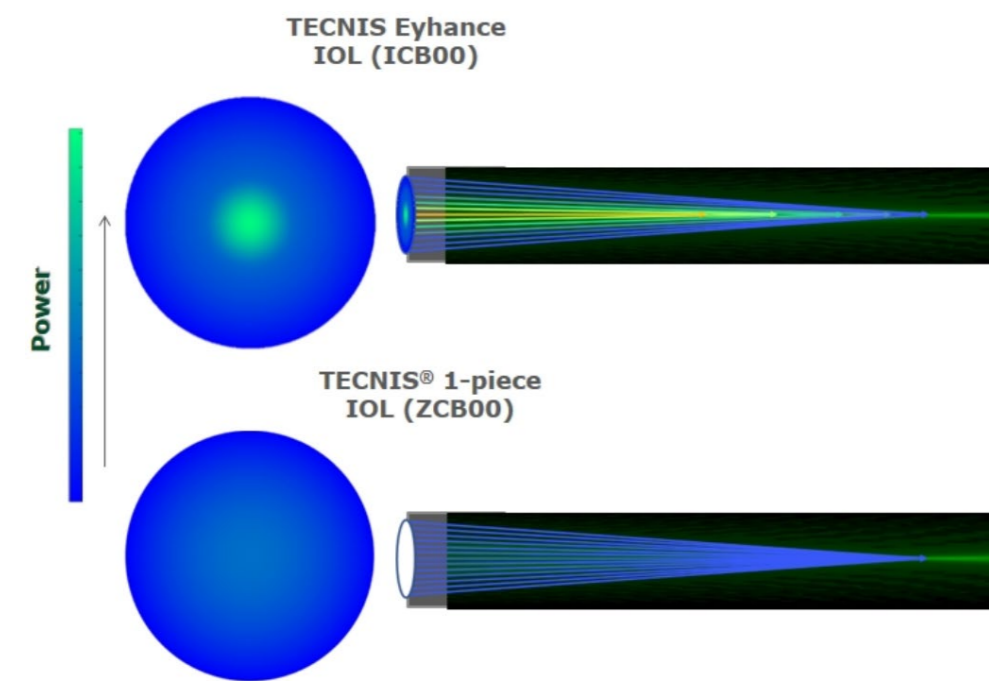
Vivity



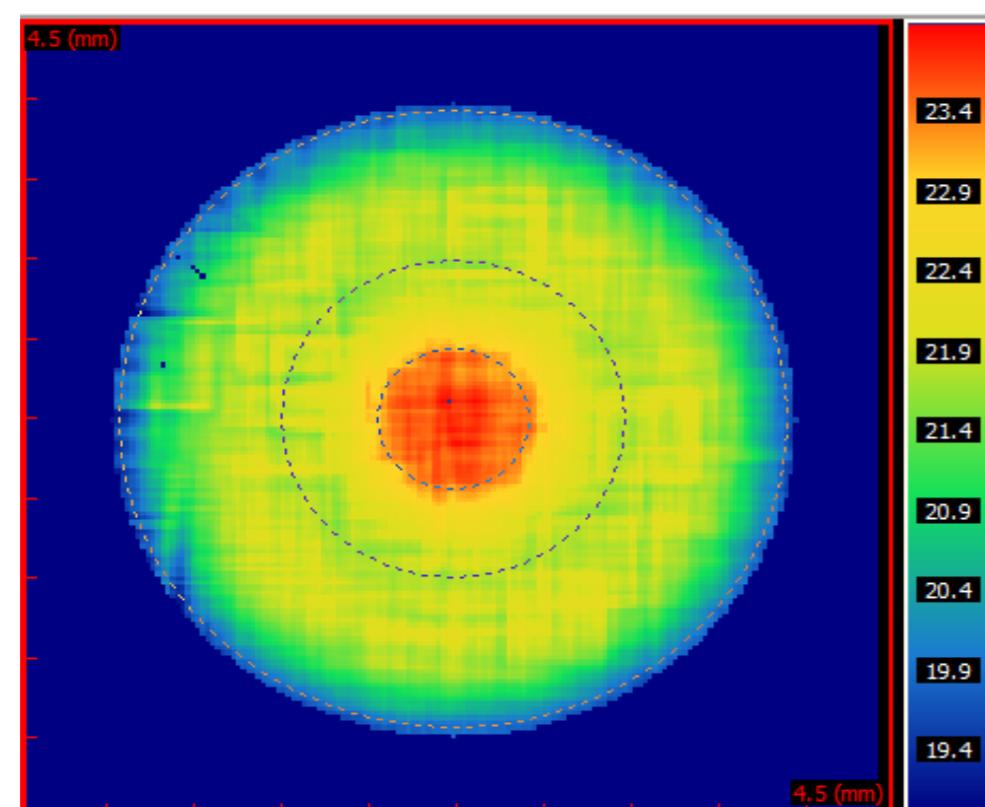
VS

Eyhance (J&J)

- Eyhance design:
 - central EDoF zone



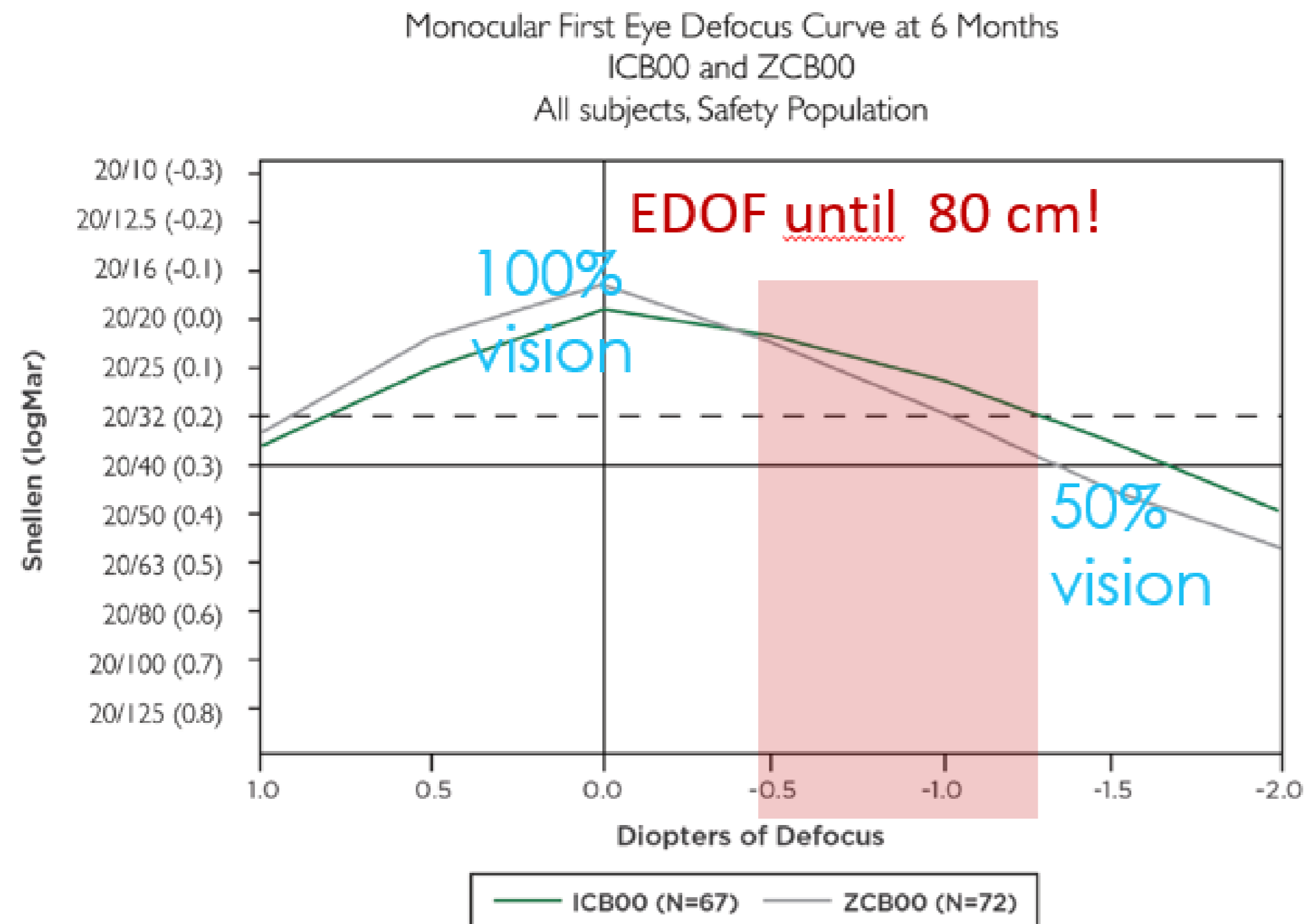
- Only 1D add power



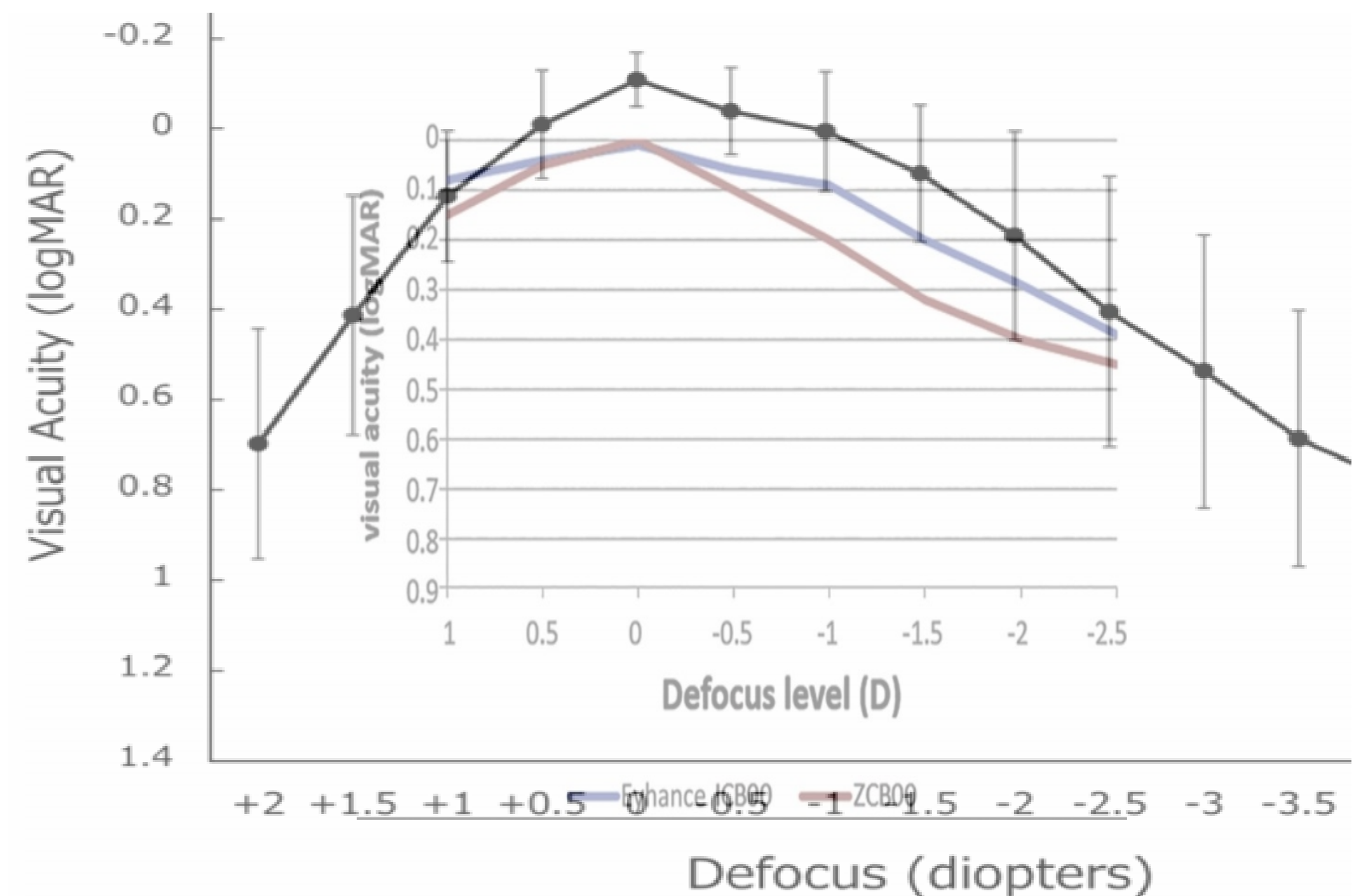
- Eyhance vs. Comfort simulation
- Comfort Advantages Factsheet:
 - Better overall defocus capacity
 - Closer usable intermediate vision (EDOF)
 - Less pupil depended; distance also excellent with small pupils
 - Proven extreme low photic side effects

Eyhance (J&J)

- Defocus curve shows very low EDOF effect



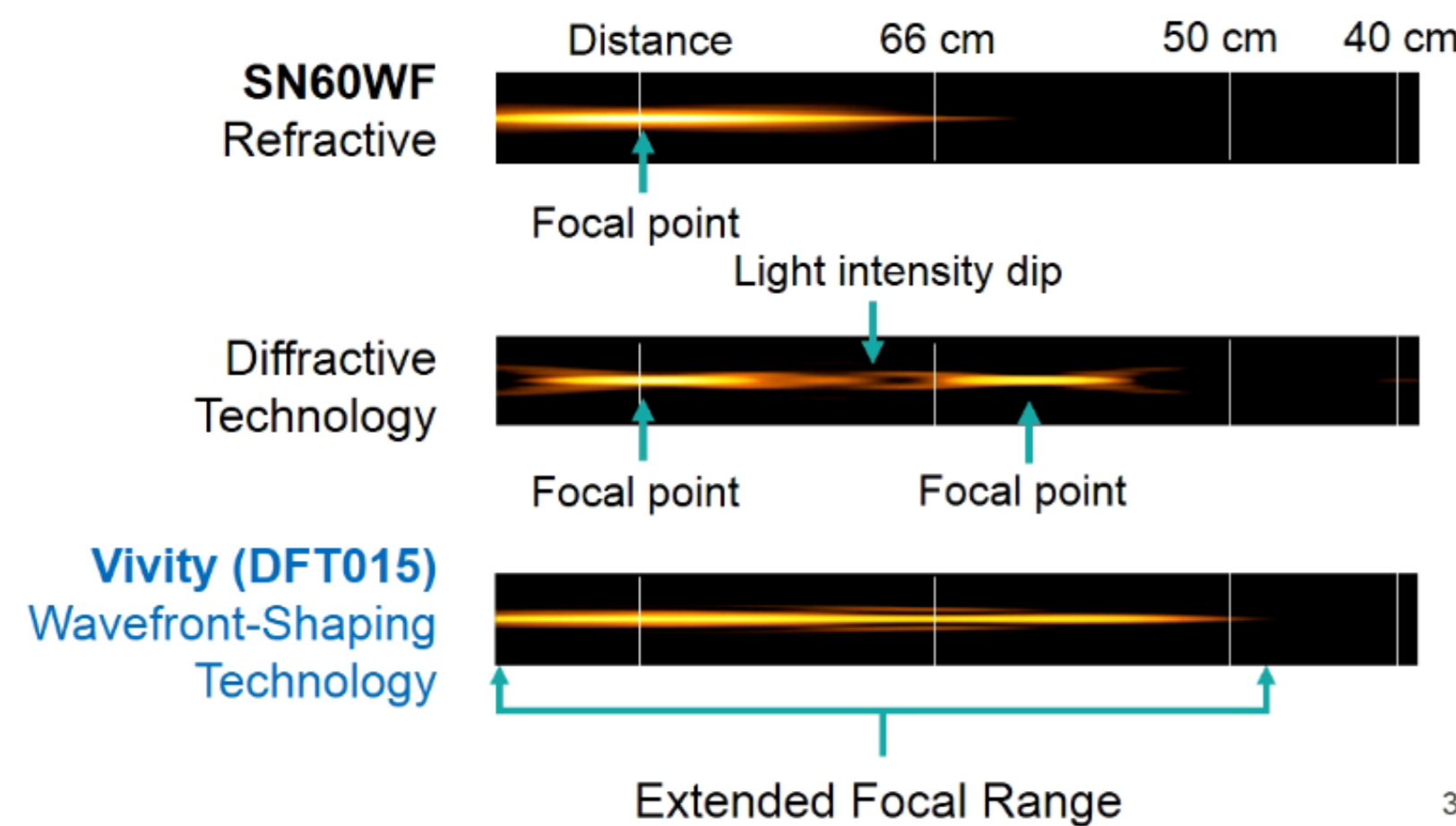
- Eyhance vs. Comfort simulation
 - Comfort (black line) Dr. Oshika
 - 1year results, published in Nature



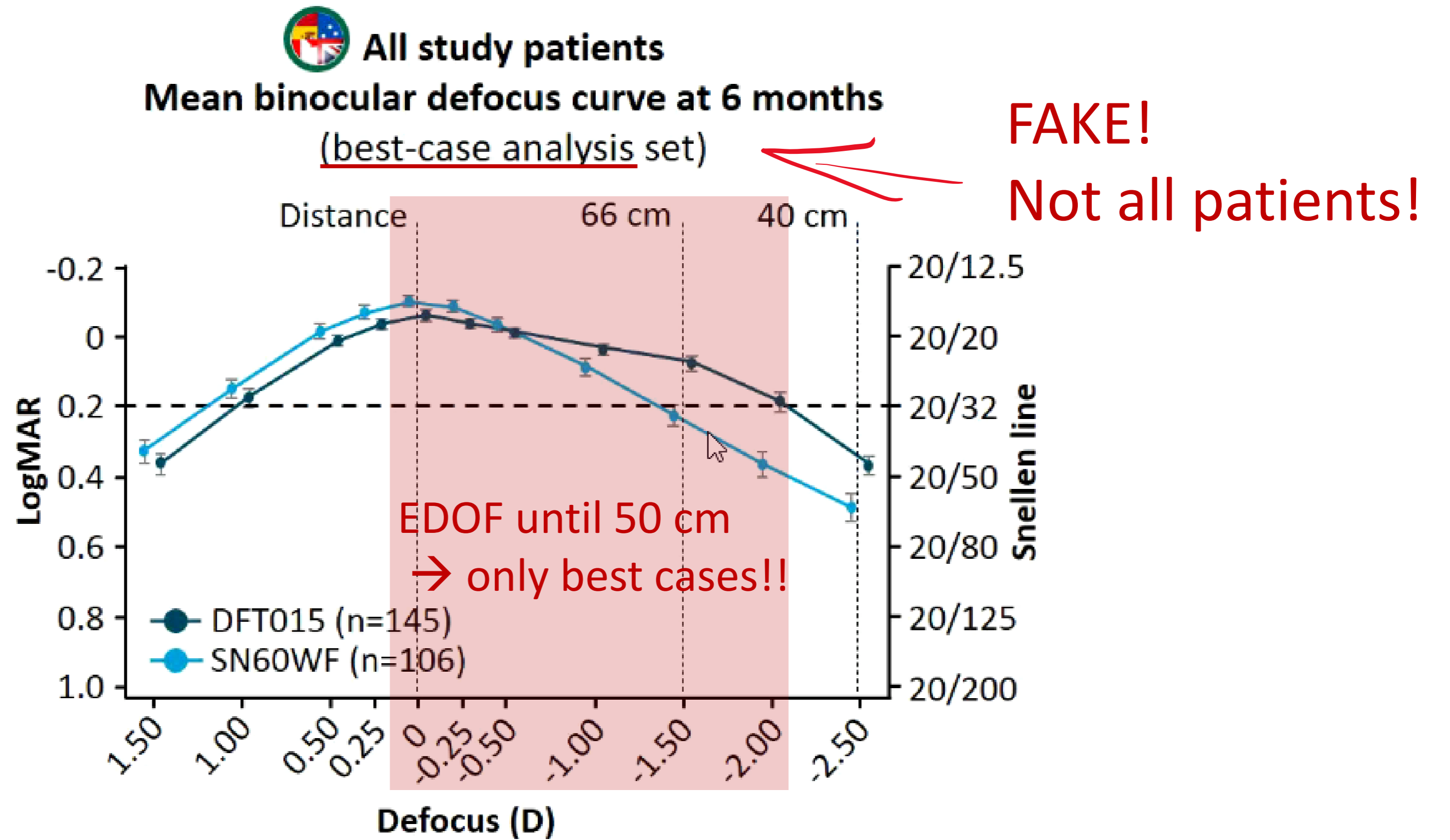
Vivity (Alcon)

- Design:
 - Wavefront shaping
 - Looks like refractive ring segment

- Vision: mono (blue) vs. Vivity (dark blue)



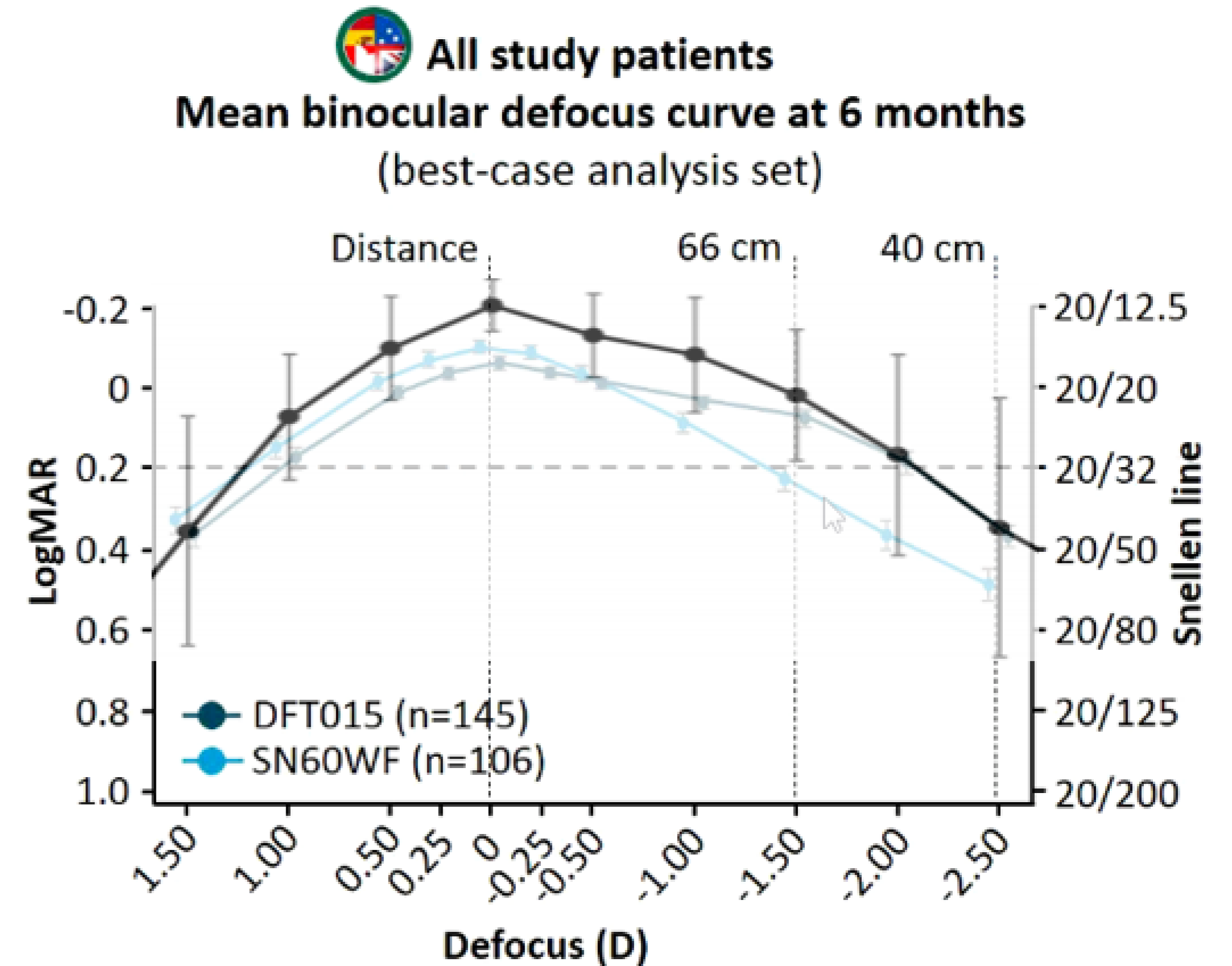
3



Vivity (Alcon)

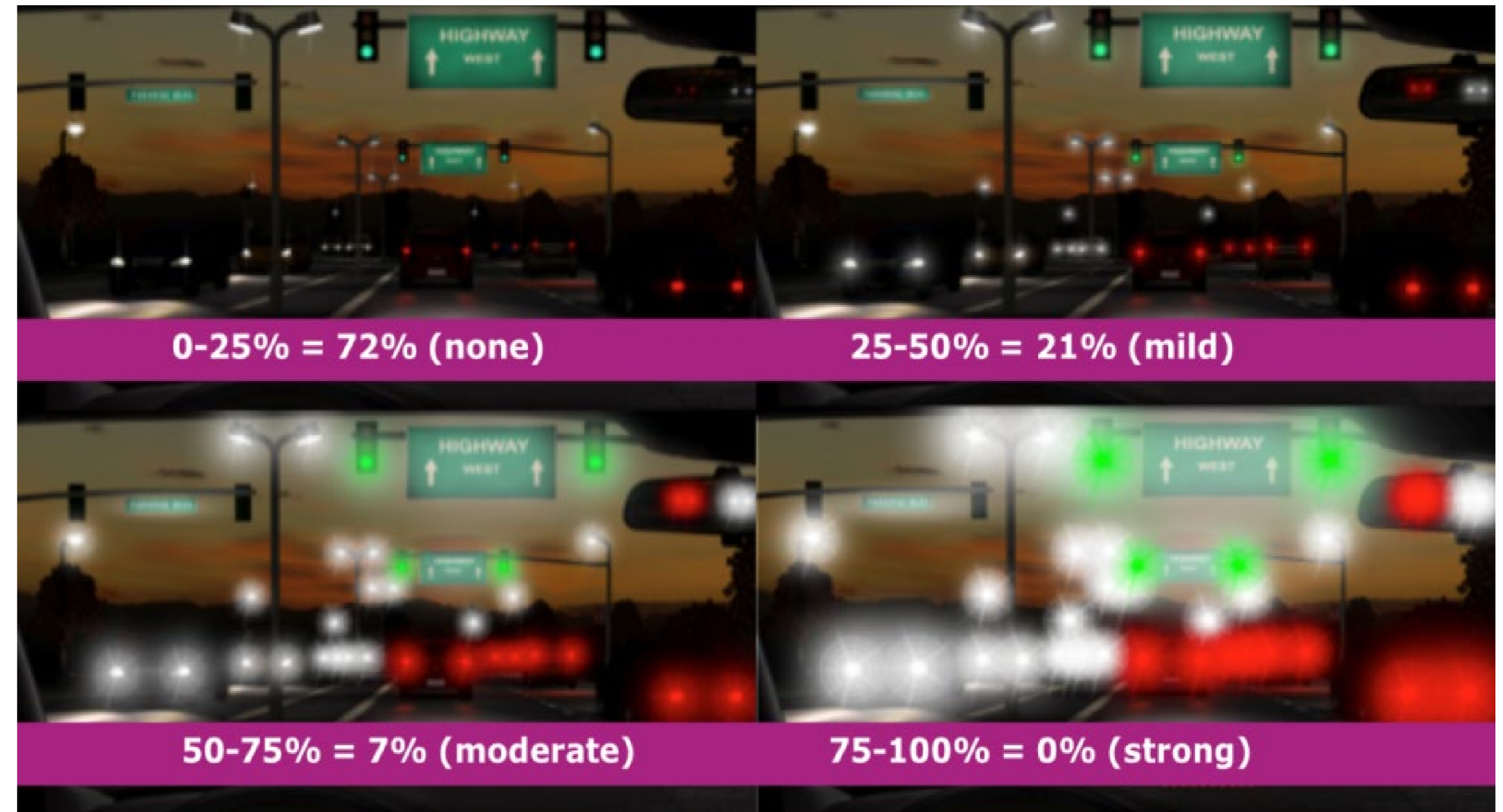
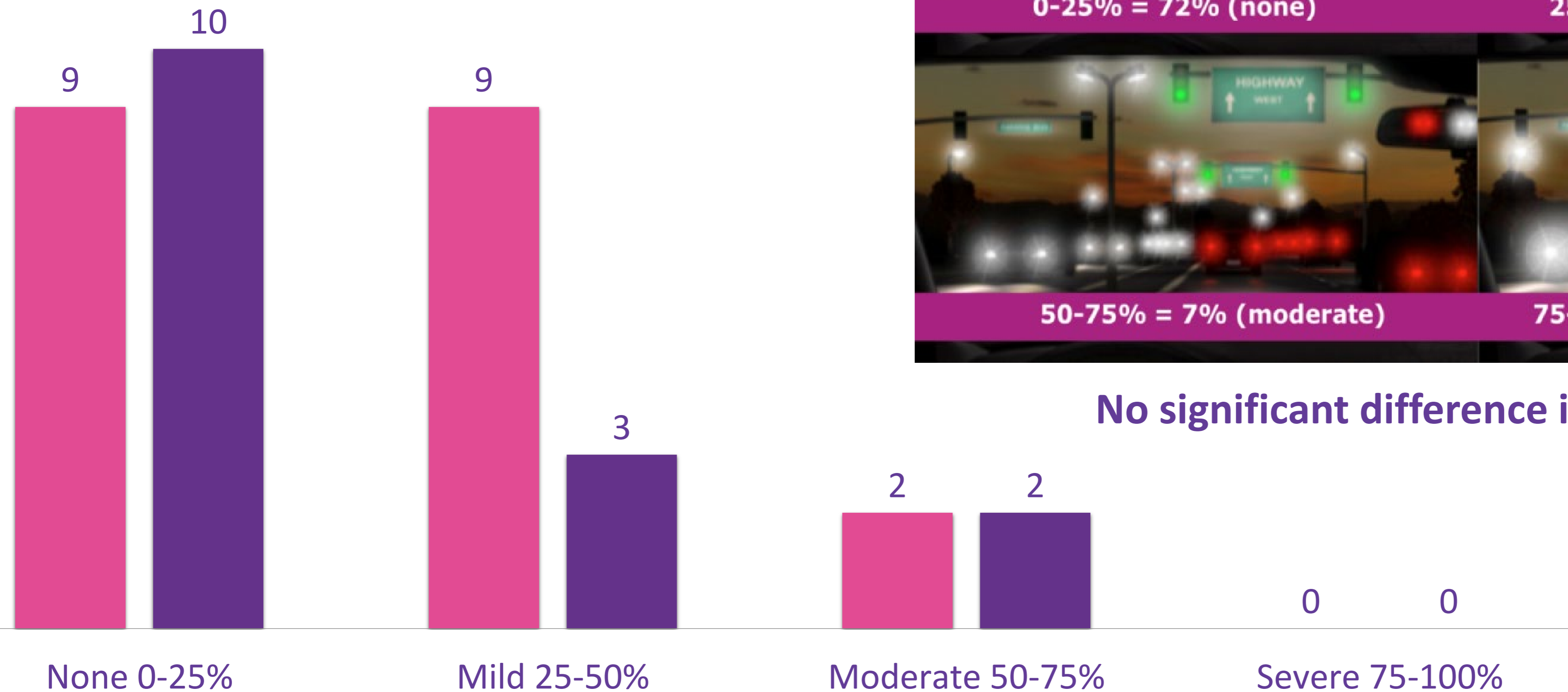
- Vivity vs. Comfort simulation
 - Comfort (black line) Dr. Oshika

- Vivity vs. Comfort simulation
- Comfort Advantages Factsheet:
 - Better overall defocus capacity
 - Better intermediate vision (EDOF)
 - Less pupil depended; elevated zone stretch with Vivity
 - Proven extreme low photic side effects



Monofocal vs Comfort MF15 - Dysphotopsia

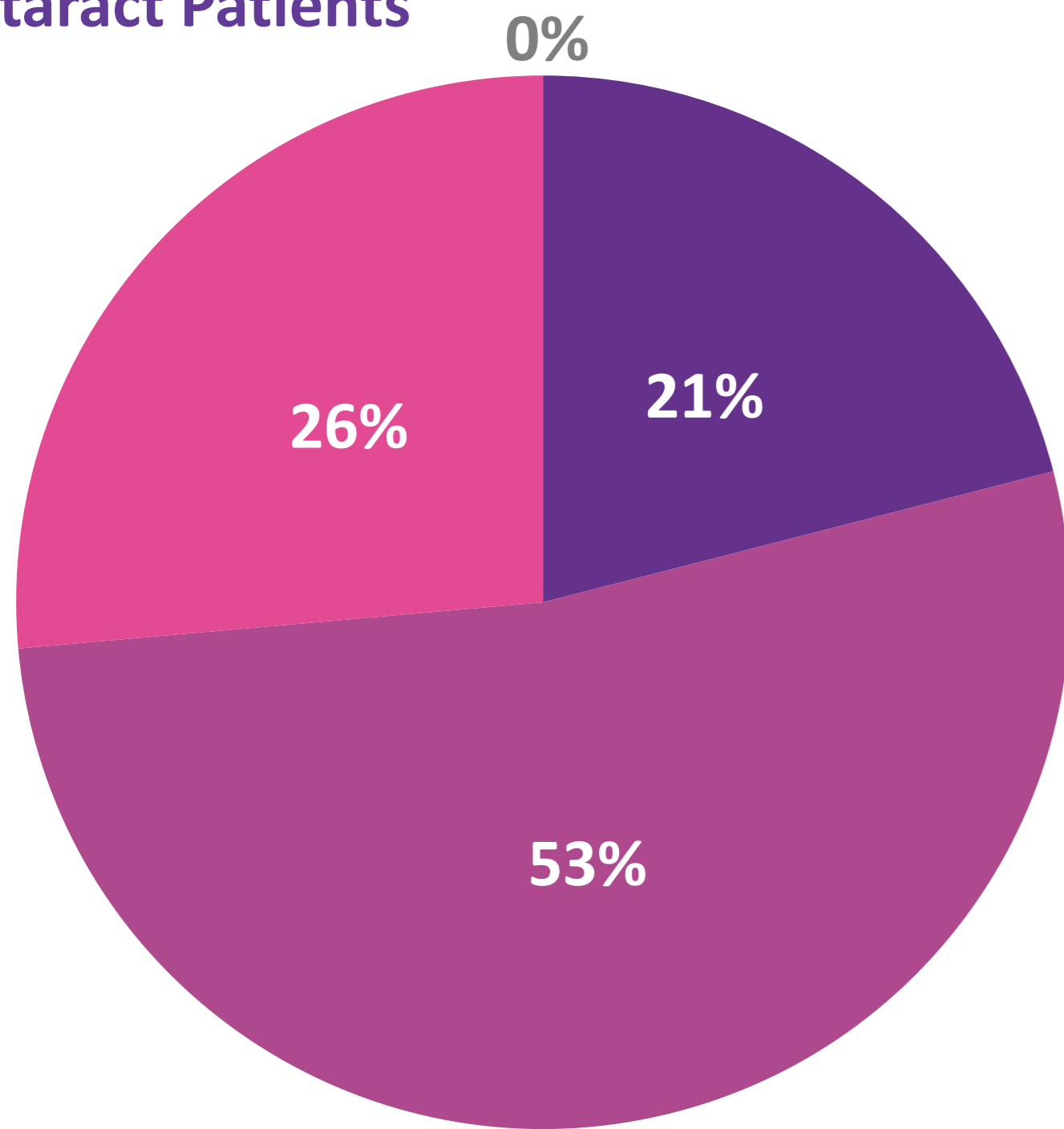
■ CT Asphina 409 ■ Lentis Comfort



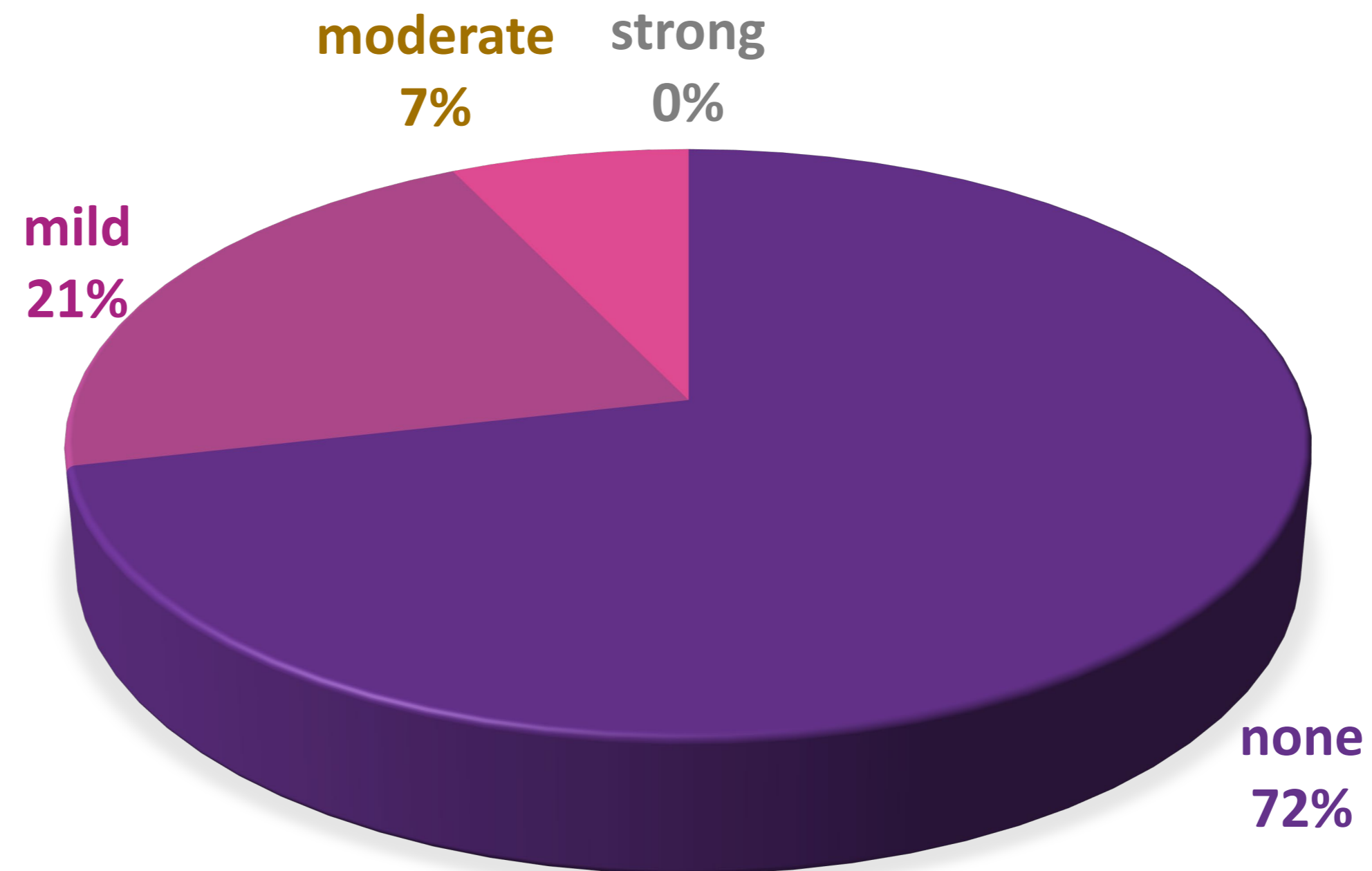
No significant difference in dysphotopsia

Cataract vs Comfort MF15 vs Monofocal - Dysphotopsia

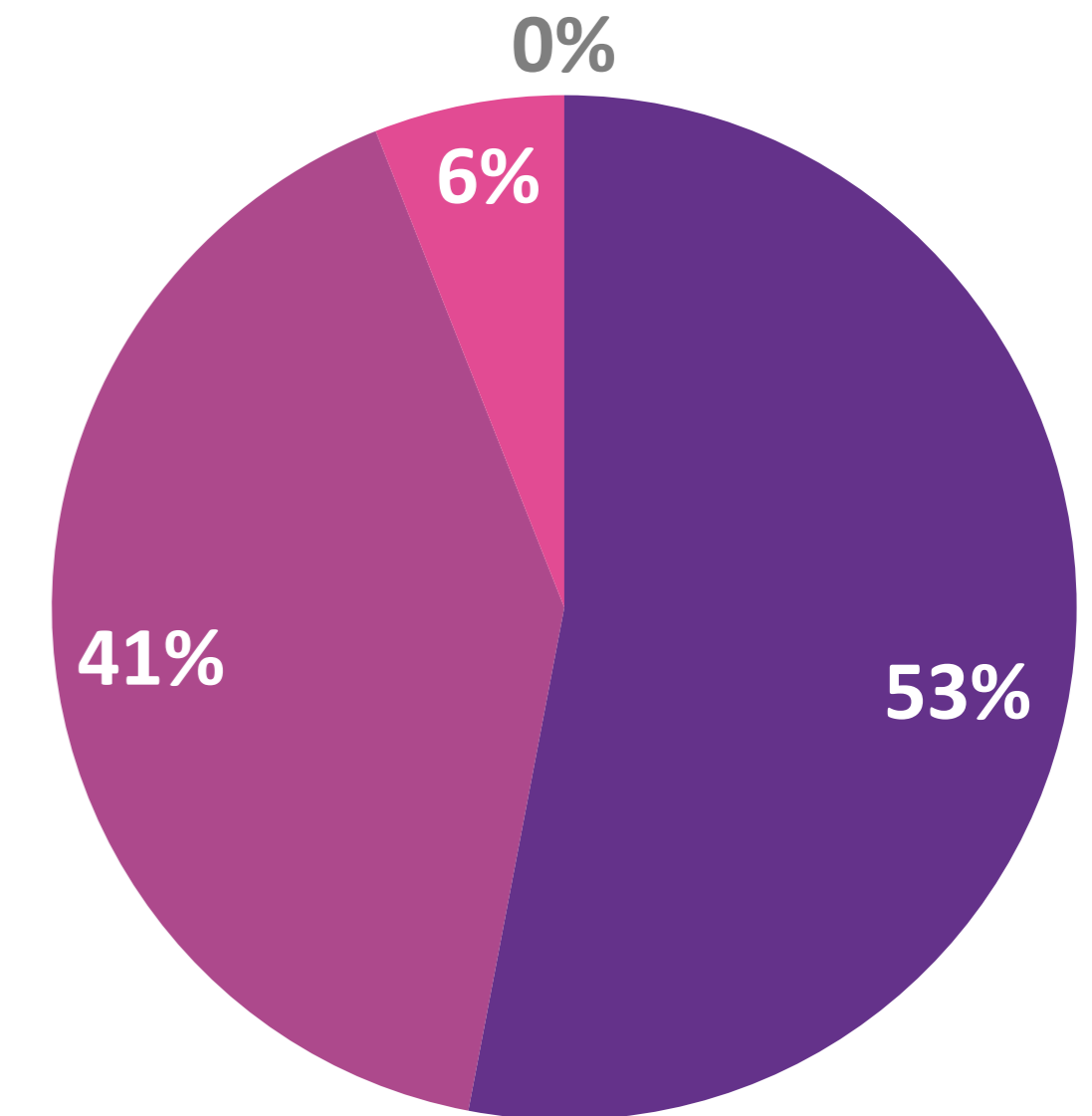
Cataract Patients

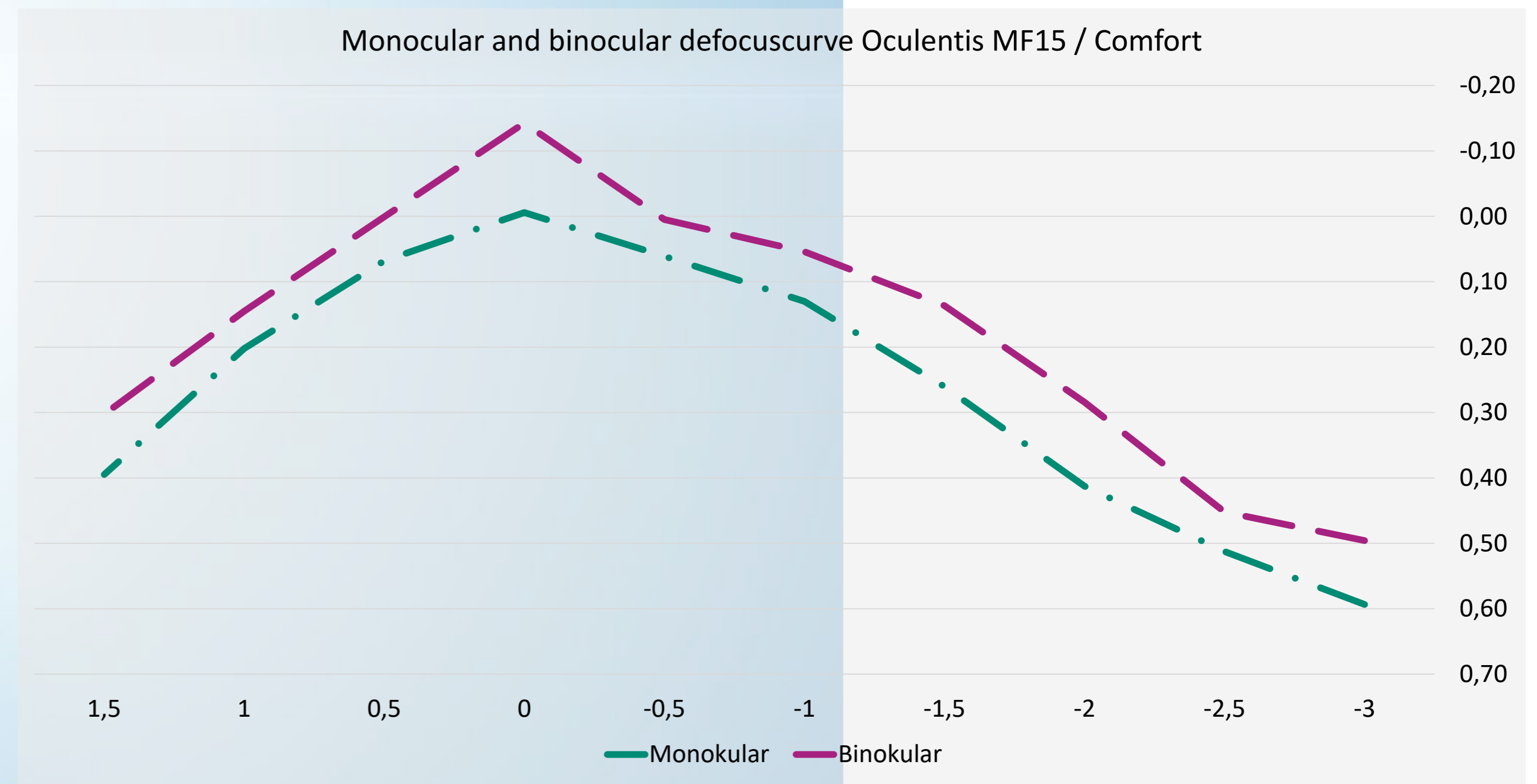


MF15



CT 409





Conclusion

- Lentis Comfort IOL – EDoF IOL shows similar to less dysphotopic phenomena incidence when compared with aberration neutral, monofocal CT Asphina 409
- Rotational Asymmetric optics shows better near-intermediate values compared to mini-EDoF IOLs
- So far no disadvantages of rotational asymmetric +1.5D add IOLs compared to mono-EDoFs



Thank You

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